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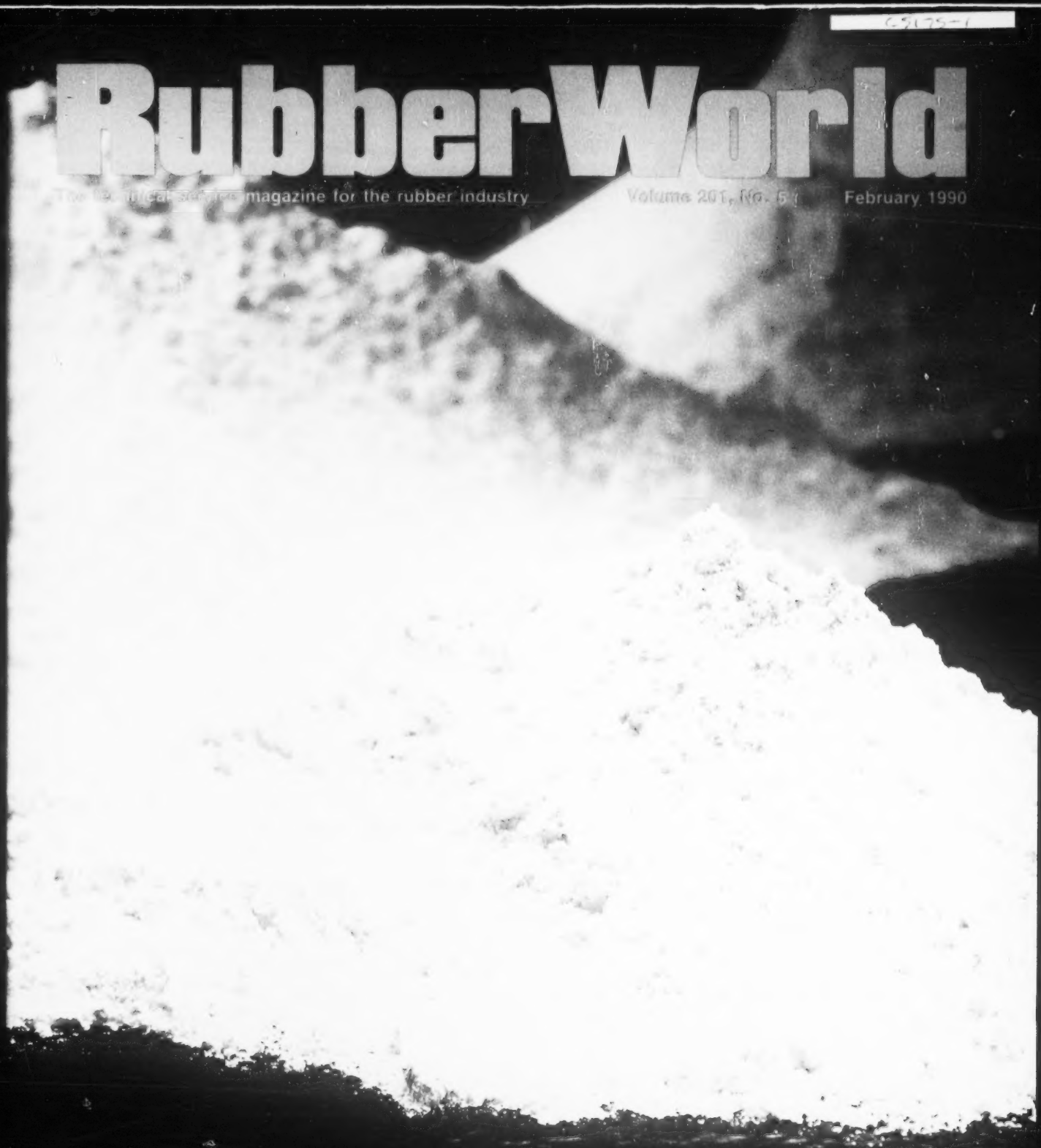
RubberWorld

The technical service magazine for the rubber industry

Volume 201, No. 5 February 1990



Mixing efficiency and quality
Mixer monitoring and control
Micro weighments of ingredients

plus: Custom services directory

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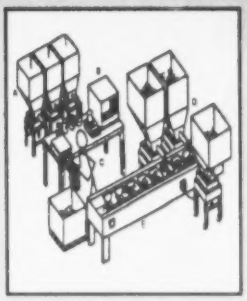

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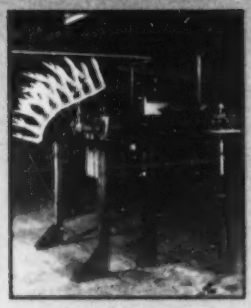

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Cover

Cover photo courtesy of Sheller-Globe.

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The Audit Bureau

Editorial

Our annual survey of the custom mixers in the rubber industry surprised us again. For the fourth straight year, the number of companies that were implementing capacity expansions was relatively high in comparison with the industry as a whole. The increases of 1987 over 1986, and 1988 over 1987, were slight in comparison to the last two years. In 1989, 42% of the North American custom mixers added to their capacity and nearly one third will add to capacity this year. It seems the main reason behind the increases is the consolidation that has taken place in the tire sector and is now spreading to the non-tire segment of the industry. Even though the tire industry has gone through intensive consolidation within the last five years, the actual tire capacity has increased. This, coupled with personnel cutbacks, streamlining of operations and other forms of restructuring, have obviously opened up more business for the custom mixer because the overall growth within the industry has been modest at best. It appears the total amount of rubber mixed has been increasing slightly, but the business to the custom mixer has been greatly increased.

This increased outsourcing of mixing has also lead to a proliferation of custom mixers. In turn, it changed the face of our annual mixing issue to include a directory of those mixers. This directory (beginning on page 33) has been set up so people can ascertain the different capabilities of companies when shopping for a custom mixer. Information is provided on what elastomers the mixer works with, the equipment used and plant capacity. We would like to say the directory includes all custom mixers in North America, but we know that's not the case. We can't force a mixer to be listed.

That's one problem you deal with in compiling directories like this. Another, which is particularly unique to this one, is in the use of registered trade names. Two of the most abused, if that's the correct word, trade names in the rubber industry are Banbury and TPR. To most in the industry, internal mixer and Banbury are synonymous. The respondents to our inquiries almost always put Banburies down for equipment used in their operations and many of these are mixers not manufactured by Farrel Corp., the only company that makes a Banbury. Farrel is very protective of the name and does not want to see it genericised. The same goes for TPR. This is a registered trade name now owned by Monsanto. It cannot be used as an acronym for thermoplastic rubber. So double check next time when you write that you mix mostly TPRs in your banburies.

Don R. Smith
Editor

RubberWorld

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- Blue Book: Materials, Compounding Ingredients, and Machinery for Rubber

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erlands will provide **Johnson Controls**, Manchester, MI, with the know how for recycling PET soft drink bottles in the U.S. and Canada. Johnson Controls is building a plastic container recovery center to reprocess 7,000 metric tons per year of used PET bottles, to be completed by the end of 1990. Future expansion will bring capacity up to 13,000 mt per year. PET recovered by the Reko technology is used for high-grade products.

Jaguar factory racing cars in both the United States and overseas will be equipped with **Goodyear** Eagle racing radial tires, designed and manufactured at the Goodyear Technical Center in Akron, OH, for the 1990 racing season. Both the Silk Cut Jaguar team and the Castrol Jaguar team will use Eagle racing radials.

Lescon of Flemington, NJ, has been appointed a sales agent for the vibrating needle curemeter produced by **Rapra Technology**, Shawbury, England. The VNC is an instrument used to monitor the cure of liquid polymers.

Monsanto Chemical, with networking support from **Babbage-Simmel & Assoc.**, Columbus, OH, can provide its customers with a data analysis and communication system that helps improve their rubber processing. The systems combine the power of RheoLogic, MooneyLogic and TensiLogic software systems with the communication flexibility of computer networking. Babbage-Simmel specializes in computer systems, technical service and training for computer network applications.

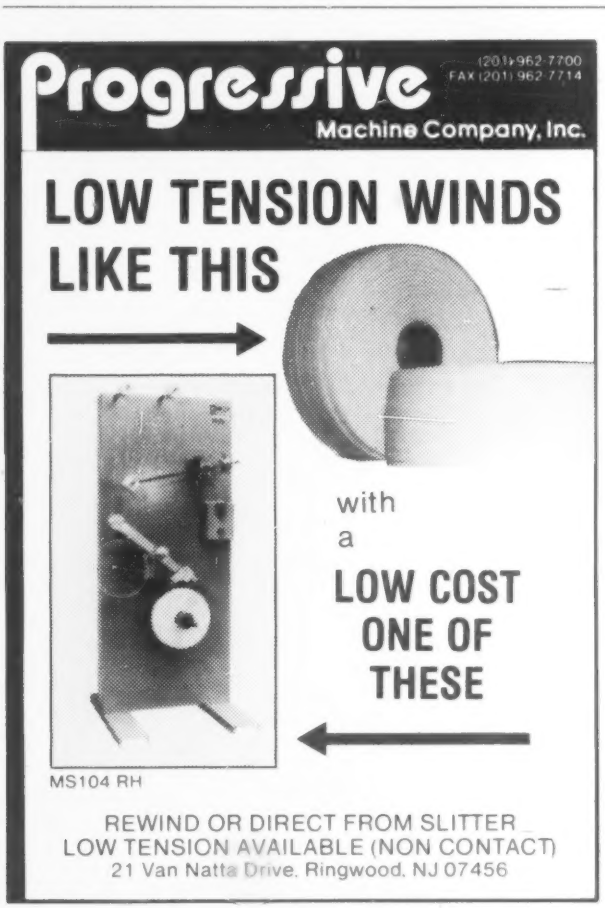
Goldsmith & Eggleton in Akron, OH has been selected to represent **Kumho E.P. Rubber Co.**, Seoul, Korea as the North American distributor of Kumho EPDM and EPR. Goldsmith & Eggleton will also handle NBR, SBR and other polymers produced by **Korea Kumho Petrochemical Co.**

Independent chemical distributor, **Chemcentral**, headquartered in Chicago, IL, has been chosen as a distributor of **Du Pont's** Hypalon CP 100 series chlorinated polyolefins. Chemcentral ready stocks the resins, and delivers LTL quantities via its own truck fleet.

Dixie Chemical, Houston, TX, appointed **Votech** a distributor for the company's line of cycloaliphatic anhydride epoxy curing agents and anhydride promoters. Votech will distribute Dixie's products in Chicago, northern Illinois, Wisconsin, northern Indiana and southwestern Michigan.

CHR Industries, New Haven, CT, appointed **Fugitt Rubber** of Memphis, TN, as a full-line distributor for its silicone rubber products, covering the vicinity of Memphis, Arkansas and Mississippi.

Polymer Industrial Products in Piney Flats, TN, manufacturers of tire curing bladders, tire building machine bladders and other custom engineered products, has appointed **Worldwide Marketing**, headquartered in Branford, CT, as exclusive sales agent for all international sales. Worldwide



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RMA tire report - October
(figures in thousands of units)

Passenger tires	YTD '89	YTD '88	% change
Shipments			
original equipment	44,060	45,043	-2.2
radial	38,423	38,399	0.1
replacement	129,182	130,150	-0.7
radial	122,858	121,797	0.9
export	10,716	7,930	35.1
radial	10,009	7,078	41.4
total	183,958	183,122	0.5
radial	171,289	167,274	2.4
Production	149,426	147,079	1.6
radial	139,728	133,952	4.3
Truck & bus tires			
Shipments			
original equipment	7,049	7,426	-5.1
radial	5,875	5,503	6.8
replacement	29,576	28,253	4.7
radial	17,688	16,603	6.5
export	2,998	2,753	8.9
radial	2,235	2,135	4.7
total	39,623	38,432	3.1
radial	25,798	24,241	6.4
Production	32,402	30,918	4.8
radial	21,744	19,107	13.8

Custom mixing capacity increasing

North American custom mixers are still bullish on the rubber industry, according to the results of *Rubber World's* annual survey of the industry. For the fourth straight year the custom mixers overwhelmingly predicted continued growth through 1990. In anticipation of this growth, almost 33% indicated that they planned to add to capacity during the year. This is on top of the expansions that were completed in 1989 at 42% of those responding to the survey.

The survey is of 61 custom mixers in North America, with a total of approximately 3.3 billion pounds of annual capacity.

Capacity increases are planned for the following: Associated Rubber plans to bring its Huntingdon, TN plant on stream; Beebe Rubber plans to increase capacity 4% through loading efficiencies; Blair Rubber is adding a calender; Cri-Tech plans a plant debottle-necking along with extrusion and screening improvements. They will also expand the lab by 100% and the warehouse by 50%. Douglas Polymer Mixing plans to triple its 11 million lbs./year capacity.

Dyna Mix has a new Banbury on order; Gayson is adding milling and mixing equipment; Global Processing's addition of 3 million pounds of capacity will be completed this year; Hoover-Hanes is currently installing a #15 Bolling Mixer; Martin Rubber is adding equipment; Ristance Compounds is adding an internal mixer for silicones; Techno Cautchouc is adding two No. 11 Banburies; Tristani Rubber plans to double its 7.2 million lbs./year capacity; and Valley Rubber Mixing is adding a 3D Banbury.

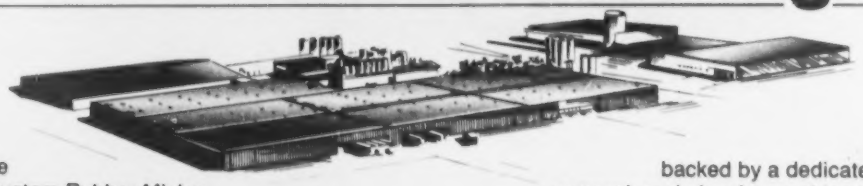
Capacity expansions are also slated for Alloy Polymers and Teknor Apex, but definite plans hadn't been set at the time of the survey.

These announcements come on the heels of the expansions that took place in 1989, one of the most aggressive years for increases since the survey was initiated seven years ago. Twenty custom mixers increased capacities in 1989. The most significant increases took place at Colonial, where they added 700 million lbs./year, Boston Industrial Products doubled capacity to 74 million lbs./year and Alloy Polymers added 25 million pounds.

Two new custom mixers began operations last year as American Silicones opened in Garrett, IN and Kardoes Custom Mixing opened in Lafayette, AL. American Silicone mixes only silicone and has an annual capacity of approximately 1.5 million pounds. Kardoes mixes NR, SBR, polybutadiene and nitrile, with a capacity of 30 million pounds.

The following pages contain a directory of custom mixers located in North America. Information is provided on the company's mixing capabilities and machinery used.

The Main Ingredient For Successful Custom Rubber Mixing.



Since 1945, the Teknor Apex Custom Rubber Mixing Division has been the main ingredient in supplying quality rubber compounds to the automotive, wire and cable, tire, consumer and industrial products markets.

Our fully automated mixing facilities with bulk black and oil handling systems in Rhode Island and Tennessee are capable of mixing most types of rubber polymers and blends. Each plant also features sophisticated laboratory facilities with state-of-the-art testing and analytical equipment.

In addition, all Teknor Apex mixed rubber products are backed by a dedicated, experienced research and development team and a customer service department that will assure on-time delivery.

The next time you specify rubber, make sure the main ingredient is the Teknor Apex Custom Rubber Mixing Division.

For further information, contact Ron Gidlow, Sales Manager, Teknor Apex Custom Rubber Mixing Division, 505 Central Avenue, Pawtucket, RI 02861.
Toll-Free in the U.S. 1-800- 556-3864.
In RI call (401) 725-8000.

TA

TEKNOR APEX

Teknor Apex is the industry standard for: Vinyl Compounds, Thermoplastic Elastomer Compounds, Color Concentrates, Vinyl Film and Sheeting.

Circle 37 on card

Custom mixing directory

The following directory lists the custom mixers along with plant locations, equipment, mixing capabilities and capacity. A directory listing companies that offer various custom services to the rubber industry follows the directory.

AC Products, Inc.
172 E. La Jolla St.
Placentia, CA 92670
(714) 630-7311
Sheldon Weinstein, President
Hugh Muller, Vice President
Equipment: Five high speed dispersion mixers and 10 low speed mixers
Mixing capabilities: All water based and solvent soluble resins and polymers
Capacity: 2 million gals/year

Alleghany Rubber, Inc.
545 Guy Paine Rd.
P.O. Box 3006
Macon, GA 31205-3006
(912) 788-6282
Fax: (912) 781-4338
David S. O'Brien
Equipment: Banbury, mills, extruder
Mixing capabilities: SBR, NR, nitrile, EPDM
Capacity: 30 million lbs/year

Alloy Polymers, Inc.
3310 Deepwater Terminal Rd.
Richmond, VA 23234
(804) 232-8000
S. Pahuja, President
Equipment: Nine lines - Werner & Pfleiderer twin screw high intensity mixers
Mixing capabilities: Specialize in engineering polymers
Capacity: 75 million lbs/year

American Silicones Inc.
420 N. Taylor Rd.
P.O. Box 90
Garrett, IN 46738
(219) 357-6161
Fax: (219) 357-6165
Jack Cochrane & Tom Lapsley
Equipment: Dough mixers, twin-roll mills, screw extruders
Mixing capabilities: Only silicone and fluorosilicone rubber
Capacity: 1 - 1.5 million lbs/year

Associated Rubber Co.
Spring St.
P.O. Box 245
Tallapoosa, GA 30176
(404) 574-2321
Bruce George, Sales Manager
Equipment: Three #11 Banburies, 3-A Banbury, lab Banbury, three calenders, Barwell preformer, extruders
Mixing capabilities: SBR, NR, NBR, CR, ECO, CSM, EPDM, IIR, CIIR, fluoroelastomers; CPE
Capacity: 90 million lbs/year

Associated Rubber Co., Huntingdon Division
P.O. Box 765
Huntingdon, TN 38344
(901) 986-3689
Equipment: 1 #11 Banbury
Capacity: 30 million lbs/year

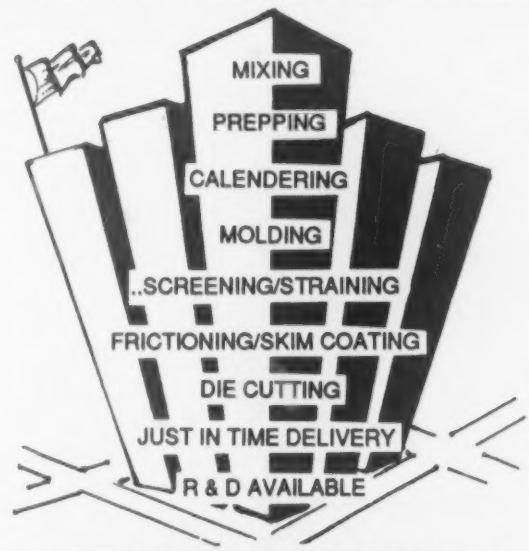
Avon Custom Mixing Services Division of Chase Corp.
55 High St.
Holbrook, MA 02343
(617) 767-0511
Mark F. Chase, Operations Manager
Craig Murphy, Factory Manager
Equipment: Two #11 Banburies, #3 Banbury, eight mills (84", 60", 48"), six calenders
Mixing capabilities: All elastomers including silicone; rubber & plastic custom mixing services
Capacity: 8 million lbs/year

Bata Rubber Products Division
4501 Pulaski Highway
Belcamp, MD 21017
(800) 222-8558
(301) 272-2000
James E. Vess, Director/Manager
Equipment: Banbury internal mixers and open mills
Mixing capabilities: All except fluoroelastomers; calendering; Barwelling; straining
Capacity: 40 million lbs/year

Beebe Rubber Co.
20 Marshall St.
Nashua, NH 03061
(603) 883-5576
Equipment: #3A Banbury, #11 Banbury, five mills (60" to 84")
Mixing capabilities: NR, CR, IIR, EPDM, SBR, NBR, CSM, polysulfide, all others except silicone; styrenic plastics
Capacity: 27 million lbs/year

Blair Rubber Company
P.O. Box 4284
1252 Mina Ave.
Akron, OH 44321
(216) 666-3600
Fax: (216) 666-9334
T.B. Blair, President; R.K. Lewis, V.P. Technical Director; A.W. Giles, Customer Service
Equipment: Internal mixer and open

CUSTOM COMPOUNDING & PROCESSING



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Contact Ed Buser Division Manager

Bata Rubber Products Belcamp, MD 21017
301/272-2000 FAX 301/272- 3346

Circle 12 on card

mill, calendering, slitter, autoclaves
Mixing capabilities: Natural, nitrile, EPDM, neoprene, chlorobutyl, butyl, hypalon, SBR
Capacity: 5 million lbs/year

Boston Industrial Products Division, Dana Corp.
Highway 77 East
P.O. Box 38
Newbern, TN 38059
(901) 627-2531
Mike Skaggs, Customer Service Mgr.
Tom Dowdle, Sales Manager
Equipment: F270 Banbury
Mixing capabilities: NR, EPDM, SBR, NBR, CR, CSM, ECO, BR
Capacity: 74 million lbs/year

Burke Industries, Inc.
2250 South Tenth Street
P.O. Box 190
San Jose, CA 95112
(408) 297-3500
Ray Brown, Senior Vice President
Equipment: #3, #9 and #11 Banburies, 48", 60" and 84" mills
Mixing capabilities: All types
Capacity: 36 million lbs/year

Burton Rubber Processing
14330 Kinsman Rd.
Burton, OH 44021
(216) 834-4644
James L. Cull, V.P. Sales & Mktg.

Branches
P.O. Box 377
Highway 34
Jonesborough, TN 37659

10 Clearview Drive
Tillsonburg, Ontario, Canada

Mach - 1 Compounding
Macedonia, OH 44056
Equipment: Banburies, FCM, mills, Barwell
Mixing capabilities: All rubber.

Capacity: 200 million lbs/year
CCA Compounding
P.O. Box 1648
1204 E. 12th Street
Wilmington, DE 19898
(302) 573-2636
P. Timothy Knaus, General Manager
Equipment: Two #4 Stewart Bolling, #10 Stewart Bolling
Mixing capabilities: Thermoplastic and elastomer blends, especially olefins, EPDM, EPR, NBR, SBR and PIB
Capacity: 55 million lbs/year

Central Rubber Co.
844 E. Jackson St.
Belvidere, IL 61008
(815) 544-2191
Bob Byczek
Fax (815) 544-6881
Equipment: Mills
Mixing capabilities: NR, SBR, neoprene, Hypalon, nitrile, EPDM, silicone, butyl, urethane, Viton, Thiokol

Colonial Rubber Works
150 South Connell Ave.
Dyersburg, TN 38024
(901) 285-4353
Glenn Thurman, General Manager,

Branch
P.O. Box 640
Kingstree, SC 29556
Equipment: Rubber - Two #27 Banburies, three #12 Stewart Bolling Mixers, six #10 Stewart Bolling Mixers, five calenders (3-60", 1-96", 1-132");

Custom mixers - East

Company	*City*	*Equipment*	*Capabilities*
Northeast			
Avon Custom Mixing	Holbrook, MA	Banburies, mills, calenders	All elastomers
Beebe Rubber Co.	Nashua, NH	Banburies, mills	All except silicone
Cri-Tech Inc.	Hingham, MA	Banburies, mills, refiners, extruders	Specialty polymers
Depco Inc.	Brentwood, NY	Mills	Exclusively silicone
Discas	Waterbury, CT	Banburies, mills, extruders, pelletizer, mixers	Thermoplastic elastomers
Dow Corning STI	Monroe, CT	Mills, extruders, mixers, testing	Silicones
J-Von	Leominister, MA	Extruders	Copolymers, elastomers
Pawling Corp.	Pawling, NY	Banburies, mills, dicer, extruders	All polymers
Pilgrim Custom Mixing	Fall River, MA	Banburies, mills, strainer	All general polymers
Quabaug Custom Mixing	N. Brookfield, MA	Banburies, extruder	Most elastomers
S & D Rubber Co.	W. Hanover, MA	Banburies, strainers, mills	All polymers
Teknor Apex Co.	Pawtucket, RI	Banburies, mixers	Most elastomers
Mid-Atlantic region			
Alloy Polymers Inc.	Richmond, VA	Mixers	Engineering polymers
Bata Rubber Products	Belcamp, MD	Mixers, mills	All except fluoroelastomers
CCA Compounding	Wilmington, DE	Mixers	TPEs and elastomer blends
Dyna-Mix	Grafton, WV	Banburies	All general elastomers
Gayson Inc.	Ringwood, NJ	Banburies, mills	Specialty silicones
Passaic Rubber Co.	Wayne, NJ	Mixers, mills, calenders, extruders	All polymers
Pelmor Laboratories Inc.	Newtown, PA	Banbury, mills	All types
Polysar Rubber Services	East Brunswick, NJ	Banburies	Most elastomers
Star-Glo Ind.	East Rutherford, NJ	Mixers, calenders, mills, extruders	Most elastomers
Technical Rubber & Plastics	Clifton, NJ	Banbury	Most elastomers
Southeast			
Associated Rubber Inc.	Tallapoosa, GA	Banburies, calenders, Barwell preformer, extruders	Most elastomers
Boston Industrial Products	Newbern, TN	Banburies	Most elastomers
Burton Rubber Processing	Burton, OH	Banburies, FCM, mills, Barwell	All elastomers
Colonial Rubber Works	Dyersburg, TN	Banburies, mixers, calenders, FCM, extruders, Boss kneaders	Thermoset & thermoplastic
Hoover-Hanes	Tallapoosa, GA	Banburies, mills	All elastomers
KArdoes Custom Mixing	Lafayette, AL	Mixers, mills	Most elastomers
KTI	La Grange, GA	Banbury	Most elastomers

Thermoplastics - One #6 FCM, two #9 FCMs, one #15 FCM, one - 36:1, 6" extruder, two - 140mm Boss Kneaders, and two #2 Stewart Bollings
Mixing capabilities: Thermoset and thermoplastic
Capacity: 1 billion lbs/year

Cri-Tech, Inc.
150 Recreation Park Dr.
Hingham, MA 02043
(617) 740-2020
Richard Mastromatteo, President
Woodford Garrigus, Technical Service
Equipment: Three #3 Banburies, two 84" mills, three 60" mills, 40" mill, two refiners, 10", 8", 6" and 4" extruders
Mixing capabilities: Specialty polymers including fluoroelastomer, fluorosilicone and silicone; specification compounding to meet ASTM, SAE, and Military requirements to FKM & FVMQ & Special alloys of FKM offered
Capacity: 7.5 million lbs/year

Depco Inc.
36 Grand Blvd.
Brentwood, NY 11717
(516) 231-1610
David Bean, President
Equipment: Two mills (40" and 45")
Mixing capabilities: Exclusively silicone
Capacity: One million lbs/year

Discas
56 Eagle Street
P.O. Box 2068
Waterbury, CT 06708
(203) 755-5755
Dennis J. Synnott, Director, Market Development
Equipment: #9 Banbury, 60" mill, 40" mill, three lab mills, lab Banbury, 6", 3-1/2", 2-1/2" and 1-1/2" extruders, underwater pelletizer, Henschel mixer
Mixing capabilities: Thermoplastic elastomers
Capacity: Not available

Douglas Polymer Mixing Corp.
30 2nd St., S.W.
Barberton, OH 44203
(216) 753-6900
Bernie Wurts, Manager, Production Planning
Nolan Douglas, President
Equipment: #3 to #27 Banburies and various mills
Mixing capabilities: All polymeric type compounds, compounding design
Capacity: 11 million lbs/year

Dow Corning STI
Corporate Headquarters
47799 Halyard Dr.
Suite 99
Plymouth, MI 48170
(313) 459-7792
S.F. Long, President
J.A. Hickey, Ex. Vice President of Operations
J.W. Carroll, V.P. Marketing/Sales
Capacity: 30 million lbs/year

Eastern Region
594 Pepper St.
Monroe, CT 06468
(203) 452-9199
Charles Romig, V.P. General Mgr.
M. Furlo, Plant Mgr.
R. Wilson, Sales Mgr.
Equipment: Mills, extruders, dough-mixers, full lab mixing, testing
Mixing capabilities: Silicones, fluorosilicones, color masterbatches
Capacity: 8 million lbs/year

Midwestern Region
U.S. 6 Hwy. - East
Kendallville, IN 46755
(219) 347-5813
Ross Shingledecker, V.P. Gen.l Mgr.; Ron Romanowski, Tech Service Mgr.
Mary Lou D'Alessandro, Sales Mgr.
Equipment: Mills, extruders, dough-mixers, development lab
Mixing Capabilities: Silicones, fluorosilicones, color masterbatches
Capacity: 18 million lbs/year

(listing continued on next page)

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- Compounds for down hole applications
- Easy molding Compounds
- "O" Ring Compounds to MIL-R-83248A
- TER-Polymer Compounds for extra chemical resistance

Eagle ELASTOMER Inc.
P.O. Box 939
Cuyahoga Falls, Ohio 44223

(216) 923-7070
FAX (216) 923-4005

Circle 14 on card

Western Region
20832 Currier Rd.
Walnut, CA 91789
(714) 595-6331
D. Closs, Vice President/G.M.
B. Jones, Plant Manager
R. Tanton, Sales Manager
Equipment: mills, extruders, dough-mixers, full lab
Mixing capabilities: Silicones, fluoro-silicones, color masterbatches
Capacity: 4 million lbs/year

Dyna-Mix Custom Mixed Rubber
P.O. Box 369
Country Club Road
Grafton, WV 26354
Marlowe N. Christopher, Vice President/Sales; Lynn Nye, Technical Mgr.
(800) 255-2681
(304) 265-5100 (in WV)
Equipment: #11 Banbury
Mixing capabilities: All general purpose elastomers

Eagle Elastomers
338 Remmington Rd.
Cuyahoga Falls, OH 44224
(216) 923-7070
Neil McHale, Director of Sales
Equipment: 36" special mill, 60" mill, 60" calender, 2-1/2" extruder, 3-1/2" extruder, 42" x 42" press
Mixing capabilities: Fluoroelastomers
Capacity: 2.50 million lbs/year

Elastomer Processing Corp.
2448 West 24th Street
Chicago, IL 60608
(312) 254-4039
Fax: (312) 254-6768
Merle Owen, Director of Sales
Equipment: #9 Banbury, #3 Banbury, 84" mill, two 60" mills, 48" mill, 60" calender, 36" calender, extruder
Mixing capabilities: All types excluding silicone
Capacity: 7 million lbs/year

Fluorocarbon/PRP Division
12257 FM 529
P.O. Box 3402
Houston, TX 77253
(713) 466-4365
Tom Turner, Sales Manager
Equipment: Banbury and open mill
Mixing capabilities: Nitriles, neoprenes, fluoroelastomers, Aflas, natural rubber, EPDM and silicones

Gayson, Inc.
P.O. Box 222
Ringwood, NJ 07456
(201) 728-8100
L. Raymond Olson, President
Equipment: Banbury, two 2-roll mills, three 3-roll mills
Mixing capabilities: Silicone, specialty colors; custom compounding of colors for silicones

Global Processing Co.
11831 Wakeman St.
Santa Fe Springs, CA 90670
(213) 945-1241
Fax: (213) 698-7818
Fred Williams, President
Equipment: Two - #4 Stewart Bolling mixers, two-60" mills, 1-42" mill and 1 - 50" mill
Mixing capabilities: All types except silicone, specialize in fluoroelastomers
Capacity: 8 million lbs/year

GLS-Plastics
1066 Dieckman Rd.
Woodstock, IL 60098
(815) 338-8662
Michelle Woodham, Marketing Assistant
Equipment: Banbury, extruders, high intensity mixers and Lowes dissolver
Mixing capabilities: Thermoplastics

Graphic Arts Rubber, Inc.
467 Dan Street
Akron, OH 44310
(216) 253-0731
Glen Hoffman, Sales Manager

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♦ specializing in FDA color selection

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- Mill mixing
- Over 15 years experience

Graphic arts rubber, inc.
467 Dan St. • Akron, Ohio 44310 • (216) 253-0731

Circle 16 on card

Equipment: Three 60" mills, two 3-roll cloth calenders
Mixing capabilities: All-no free black; custom calendering - custom mixing
Capacity: 3 million lbs/year

Hoover-Hanes
Pequanoc Dr.
Tallapoosa, GA 30176
(404) 574-2341
Jack Williams, Vice President and General Manager
Equipment: #270 Banbury, #12 Banbury, #9 Banbury, 84" mill, 100" mill
Mixing capabilities: All grades of soft and hard rubber
Capacity: 58 million lbs/year

J-Von
25 Litchfield St.
Leominister, MA 01453
(508) 537-4721
Daniel Hunter, General Manager
Equipment: 2-1/2" single screw extruder, 4-1/2" single screw extruder, 67mm twin screw extruder and 110mm twin screw extruder
Mixing capabilities: Styrenic block copolymers, thermoplastic elastomers
Capacity: 21 million lbs/year

Kardoes Rubber Co.
P.O. Box 350
LaFayette, AL 36862
(205) 864-0777
Fax: (205) 864-0776
H. Frank Kardoes
Equipment: 5-268 mixer
Mixing capabilities: Natural rubber, styrene butadiene rubber, polybutadiene, nitrile
Capacity: 30 million lbs/year

Kleen-Tex Inc.
Plant III, Orchard Hill Rd.
P.O. Box KTI
La Grange, GA 30241
(404) 882-8134
800-241-2323
Fax: (404) 884-6378
John R. Smith, Division Manager
Equipment: S-268 mixer
Mixing capabilities: Nitrile, SBR, PBD, natural, EPDM, chlorobutyl
Capacity: 24 million lbs/year

Laur Silicone Rubber Compounding, Inc.
4930 S. M-18
P.O. Box 509
Beaverton, MI 48612
(517) 435-7706
Dan Laur, Vice President
Equipment: 24" mill, 60" mill, 10 gal. and 150 gal. double arm mixers, preforming strainers
Mixing capabilities: Exclusively silicone rubber
Capacity: One million lbs/year

Mach-1 Compounding
775 E. Highland Rd.
Macedonia, OH 44056
(216) 467-8109
Edward M. Echan, Vice President, Plastic Compounding Operations; Rob Dirienzo, Sales Manager
Equipment: #3D Banbury, Henschel, ribbon blender, F80 Banbury, #4 FCM
Mixing capabilities: Thermoplastic, thermoset, thermoplastic elastomer, alloys, fluoroelastomers, slabs, strips or pellets
Capacity: 35 million lbs/year

Martin Rubber Co. of Ohio
9976 Rittman Road
Wadsworth, OH 44281
(216) 336-6604
T.O. Martin, Jr., President
Equipment: 3A Banbury, four 60" mills, one 60" calender, one 54" calender, one cameron slitter
Mixing capabilities: All types except silicone and Viton; custom calendering, mixing, and slitting
Capacity: 5 million lbs/year

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GA 404/882-8134
FAX: 404/884-6378
Ask For John R. Smith, Div. Manager
KLEEN-TEX, INC.
P.O. BOX KTI, LaGrange, GA 30241

Circle 17 on card

TRISTANI RUBBER INDUSTRIES, INC.

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- Thermoplastic Elastomers
- Dispersions & Masterbatches

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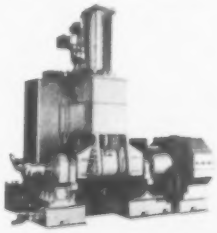

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Sabana Seca 00749
Carr. #2 Km 15.1
Hato Tejas
Bayamon, P.R. 00619

TEL: (809) 798-3131
FAX (809) 740-3965

Circle 18 on card

Master Processing Corp.
2500 Thompson St.
P.O. Box 740
Long Beach, CA 90801
(213) 531-3880
L.G. Parasson, Sales & Marketing
Branch
Muscatine, IA
(319) 262-2505
Equipment: Two 8" strainers, rubber refiner, #11 Banbury, three #12 Stewart Bolling, #10 Stewart Bolling, three 66" calenders, 60" calender, seven mills (60", 66", 84"), fabric slitter
Mixing capabilities: All of the solids
Capacity: 125 million lbs/year

Midwest Rubber
Custom Mixing Division
745 Norton Ave.
P.O. Box 270
Barberton, OH 44203
(216) 753-5056
Gerry Weigand, General Manager
Equipment: #11 Banbury, Shaw K-7, #12 Stewart Bolling
Mixing capabilities: Standard types
Capacity: 60 million lbs/year

Oliver Rubber, Flexmix Division
6840 Forrest Park Rd.
Dallas, TX 75235
(214) 350-7851
Fax: (214) 350-6281
(800) 346-5928
Dan Warner, Sales Mgr. - Flexmix; Lori Peterson, Sales Assistant
Equipment: Multiple Banburies, mills, extruders, calenders and slitters

Paeco Rubber Div. of Akro Corp.
225 W. Lake St.
P.O. Box 472
Ravenna, OH 44266
(216) 296-9691
(216) 673-4100
James E. Roscoe, Plant Manager; Joel Donnenwirth, Tech Sales Mgr.
Equipment: #10 Stewart Bolling
Mixing capabilities: All except specialty rubbers or thermoplastics
Capacity: 20 million lbs/year

Passaic Rubber Co.
45 Demarest Dr.
P.O. Box 505
Wayne, NJ 07474-0505
(201) 696-9500
Fax: (201) 696-0686
John Mathey or Jeff Leach
Equipment: #4 Stewart Bolling, five mills (60" to 84"), two 54" calenders, 4" extruder
Mixing capabilities: All polymers
Capacity: 5 million lbs/year

Pawling Corp.
157 Charles Colman Boulevard
Pawling, NY 12564-1188
(914) 855-1000
Maurice V. Smith, Vice President and Technical Director
Equipment: Two #11 Banburies, #3 Banbury, two 84" mills, 60" mill, 48" mill, dicer, three strainer/extruders; complete laboratory & testing facilities
Mixing capabilities: Natural and synthetic polymers including silicone
Capacity: 40 million lbs/year
Pelmor Laboratories Inc.
401 Lafayette St.
Newtown, PA 18940
(215) 968-3334
Equipment: #1B Banbury, three mills (18", 40", 60")
Mixing capabilities: Generally all types, specializing in Viton
Capacity: 500,000 lbs/year

Pilgrim Custom Mixing
84 Water St.
Fall River, MA 02722
(508) 675-0181
Ext. 318-322
John P. Davis, Manager
Joseph A. Davis, Manager
Equipment: Three #11 Banburies, two 60" mills, three 84" mills, strainer
Mixing capabilities: All general pur-

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- Calhac, Honda Preferred Supplier

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P.O. Box 472, 225 West Lake Street, Ravenna, Ohio 44266 (216) 673-4100

Circle 19 on card

Custom Mixing

SERVICE TO THE RUBBER INDUSTRY

Polymerics, Inc.

2828 Second Street, Cuyahoga Falls, OH 44221
216-928-2210

Circle 20 on card

Custom mixers - Ohio

Company	*City*	*Equipment*	*Capabilites*
Blair Rubber Co.	Akron, OH	Mixer, mills calendering	Most elastomers
Burton Rubber Processing	Burton, OH	Banburies, FCM, mills, Barwell	All rubbers
Douglas Polymer	Barberton, OH	Banburies, mills	All polymeric compounds
Eagle Elastomers	Cuyahoga Falls, OH	Mills, calenders, extruders	Fluoroelastomers
Graphic Arts Rubber Inc.	Akron, OH	Mills, calenders	All-no free black,
Mach-1 Compounding	Macedonia, OH	Banburies, blenders, FCM	Most elastomers
Martin Rubber Co. of Ohio	Wadsworth, OH	Banburies, mills, calenders	All except silicone and Viton
Midwest Rubber	Barberton, OH	Banburies, Shaw mixer	Standard types
Paeco Rubber Div. of Akro	Ravenna,OH	Mixers	All except specialties
Polymerics Inc.	Cuyahoga Falls, OH	Banburies, mills, extruder	Most elastomers
Polysar Rubber Services	Akron, OH	Banburies	Most elastomers
Rainbow Mastermixing Inc.	Akron, OH	Mills, granulators	All types
Rauh Rubber Inc.	Akron, OH	Banburies, mills, Barwell, extruder/	Most elastomers
Rubber Mixing Ind.	Wooster, OH	Banburies, calenders	Most elastomers
Valley Rubber Mixing Corp.	Copley, OH	Mills, mixers	All polymers

pose polymers
Capacity: 13 million lbs/year

Polymerics, Inc.
2828 Second St.
Cuyahoga Falls, OH 44221
(216) 928-2210
Dave Topliff, General Manager
Equipment: #9 Banbury, 60" mill, 84" mill, extruder
Capacity: 12 million lbs/year

Valley RUBBER MIXING

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- Open mill mixing
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- Colors or black
- Formulation and compound development
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- Dispersions - standard or custom made

CUSTOM CALENDERING

Valley RUBBER MIXING
3261 Copley Road
Copley, Ohio 44321
(216) 668-6513

Circle 21 on card

Polysar Rubber Services
2603 W. Market St.
Akron, OH 44313
(216) 836-0451
T.C. Green, Vice President and G.M.
R.W. Houkom, G.M., Silicones
D.J. Kraus, Manufacturing Manager

Regional Plant Locations:
1020 Lambert St.
Barberton, OH 44203
(216) 745-1184
N. Griffin, Site Manager

Colonial Oaks Industrial Park
P.O. Box 327
East Brunswick, NJ 08816
(201) 257-9600
A.T. Lipsky, Site Manager

1038 Evans Ave.
Akron, OH 44305
(216) 630-9460
Ray Brabson, Site Manager
Equipment: Two #4 Banburies, two #11 Banburies, #12 Banbury, two F270 Banburies
Mixing capabilities: Most organic rubbers and thermoplastics, silicone, separate black and non-black facilities
Capacity: Approximately 100 million lbs/year

Quabaug Custom Mixing
North Brookfield, MA 01535
(800) 325-5022
(617) 867-7731
Kevin Donahue
Equipment: Two Banburies, one #9 Banbury, two lab Banburies, extruder/strainer
Mixing capabilities: SBR, neoprene, nitrile, butyl, EPDM, hydrins
Capacity: 50 million lbs/year

R&S Processing Co., Inc.
15712 Illinois Ave.
P.O. Box 2037
Paramount, CA 90723
(213) 531-1403
James Inga, President
Equipment: #9 Banbury (black), #4 Stewart Bolling (colors)
Mixing capabilities: NR, IR, SBR, IIR, EPDM, ECO, CR, urethane, fluoroelastomers, NBR
Capacity: 18 million lbs/year

Rainbow Mastermixing Inc.
455 Dan St.
Akron, OH 44310
(216) 374-1810
Daniel R. Unk, President
Equipment: 60" rubber mills, granulators, 42" rubber mill
Mixing capabilities: All types, specializing in colors and fluoroelastomers
Capacity: 2 million lbs/year

Rauh Rubber Inc.
1310 DeValera Ave.
Akron, OH 44310
(216) 633-4282
Joe Rauh, President
Equipment: #11 Banbury, 60" mill, 84" mill, Barwell extruder/preformer, 3A Banbury, two 48" mills, rheometer, BR Banbury, lab mill
Mixing capabilities: NR, SBR, EPDM, NBR, CR, EPR, IIR, ECO, TPE
Capacity: 20-30 million lbs/year

Ristance Compounds
14155 Esther Ave.
Mishawaka, IN 46545
(219) 259-9903
Equipment: mills, extruders, high intensity mixer
Mixing capabilities: Silicone, PVC

Rubber Mixing Industries
1205 E. Bowman St.
Wooster, OH 44691
(216) 264-4091
E. David Gordon
Equipment: #3A Banbury, #11 Banbury, 68" 3-roll calender, 66" 3-roll calender, 78" 4-roll offset calender
Mixing capabilities: NBR, SBR,

Custom mixers - Midwest

Company	*City*	*Equipment*	*Capabilities*
American Silicones	Garrett, IN	Mixers, mills, extruders	Silicones
Burton Rubber Processing	Tillsonburg, Ont.	Banburies, FCM, mills, Barwell	All elastomers
Central Rubber Co.	Belvidere, IL	Mills	Most elastomers
Dow Corning STI	Kendallville, IN	Mills, extruders, mixers	Silicones
Elastomer Processing	Chicago, IL	Banburies, mills, calenders, extruders	All types except silicone
GLS Plastics	Woodstock, IL	Banburies, extruders, mixers,	Thermoplastics
Laur Silicone	Beaverton, MI	Mills, mixers, strainers	Exclusively silicone
Ristance Compounds	Mishawaka, IN	Mills, extruders, mixers	Silicone, PVC
Uniroyal Plastics Co.	Mishawaka, IN	Banburies, mills, mixers	All synthetics

EPDM, CSM, CR, IIR, custom calendering
Capacity: 35-40 million lbs/year

S&D Rubber Co.
King Street
W. Hanover, MA 02339
(617) 878-2626
John P. Davis, Manager
Joseph A. Davis, Manager
Equipment: Three #9 Banburies, two strainers (4" and 8"), two mix mills (60" and 84")
Mixing capabilities: All polymers
Capacity: 15 million lbs/year

Star-Glo Industries
2 Carlton Ave.
East Rutherford, NJ 07073
(201) 939-6162
E. Peterhoff, General Manager
Equipment: Two #3A Banburies, two 66" calenders, eight mills, six extruders
Mixing capabilities: NR, SBR, CIS-BR, NBR, CR, IIR, EPDM, CSM, ACM, urethane, Norsorex, fluoroelastomers, silicone;
Capacity: 2 million lbs/year

Technical Rubber & Plastics
180 Getty Ave.
Clifton, NJ 07015
(201) 546-0700
Marc Witt, Vice President
Equipment: #3A Banbury
Mixing capabilities: Most elastomers

Techno Caoutchouc Inc.
C.P. 4180-468 St. Roch Nord
Rock Forest, Quebec J1N 1E2
Equipment: Banburies
Mixing capabilities: Most elastomers
Capacity: 20 million lbs/year

Teknor Apex Company
Pawtucket, R.I. 02861
(401) 725-8000
Fax: (401) 725-8095
Ron Gidlow, Custom Rubber Mixing; Lew Green, Thermoplastic elastomers
Equipment: Banburies; internal mixers
Mixing capabilities: Most elastomers

Tristani Rubber Industries
Box 1051
Sabana Seca, Puerto Rico 00749
(809) 798-3131
Fax: (809) 740-3965
John T. Sherwood
Mixing capabilities: Most elastomers
Capacity: 7.2 million lbs/year

Uniroyal Plastics Company
Elastomeric Products Division
312 North Hill Street
P.O. Box 2000
Mishawaka, IN 46544-1399
(219) 256-8360
Richard Hupp - National Sales Mgr.
Equipment: Banbury, open mill and internal mixer
Mixing capabilities: All natural and synthetic; compounding; calendering; extruding
Capacity: 200 million lbs/year

Valley Processing
491 Wilson Way
Industry, CA 91744
(818) 961-0311
Sy Hasan, Vice President, Sales
Equipment: #11 Banbury, two #12 Stewart Bollings, #4 Stewart Bolling, #3A Banbury, BR lab Banbury, 66" 4-roll fabric calender, 60" 3-roll gum calender
Mixing capabilities: All organic elastomers, black and colors
Capacity: 112 million lbs/year

Valley Rubber Mixing, Inc.
3261 Copley Road
Copley, OH 44321
(216) 668-6513
James A. Berresford, president
Jack L. Reilly, Vice President
Equipment: Open mill, high intensity mixer to 1,000 lb. batch size
Mixing capabilities: All polymers, all colors, most blacks
Capacity: 2.5 million lbs/year

Hermann Weber & Co., Inc.
103 East Front Street
Red Bank, NJ 07701
(201) 530-2100
Jeffrey Herring, President
Services offered: Rubber calendering, milling; mixing

West American Rubber Co.
750 North Main St.
Orange, CA 92668
(714) 532-3355
Paul Colton, Vice President, Technical Services
Equipment: #3A and #11 Banburies
Mixing Capabilities: All solid polymers
Capacity: 24 million lbs/year

Custom Services

ACM Corporation
117 Industrial Road
Summerville, SC 29483
(803) 821-1888
Rick Moore, President
Services: Granulating and grinding of vulcanized and unvulcanized polymers from 1" down to 100 mesh
Equipment: Grinders - ambient and

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FAX: (216) 745-5862
3717 CLARK MILL ROAD
BARBERTON, OH 44203 USA

Circle 22 on card

Custom mixers - Southwest, West

Company	*City*	*Equipment*	*Capabilities*
Fluorocarbon/PRP	Houston, TX	Banbury, mill	Most elastomers
AC Products Inc.	Placentia, CA	Mixers	Resins, polymers
Burke Industries Inc.	San Jose, CA	Banburies, mills	All types
Dow Corning STI	Walnut CA	Mills, extruders, mixers	Silicones
Global Processing	Santa Fe Springs, CA	Mixers, mills	All types except silicone
Master Processing	Long Beach, CA	Strainers, refiner, Banburies, mixers calenders, mills	All solids
R & S Processing	Paramount, CA	Banbury, mixer	Most elastomers
Valley Processing	Industry, CA	Banburies, mixers,calenders	All organic elastomers
West American Rubber.	Orange, CA	Banburies	All solid polymers

cryogenic, granulators, bale granulators and grinders, and sizing equipment

Akron Dispersions, Inc.
3291 Sawmill Road
P.O. Box 4295
Akron, OH 44321
(216) 666-0045
Michael J. Giustino, President
Jeanne Volk, Customer Service
Services offered: Chemical grinding and blending, rubber grinding, DLCs, liquid blending

Baker Rubber, Inc.
P.O. Box 2438
South Bend, IN 46680
(219) 291-5101
Fax: (219) 291-5101
William E. Stoler, Sales Manager
Services offered: Grinding of tires, buffings, tread rubber, SBR, EPDM and neoprene
Equipment: Grinders and choppers; vibrating screens

Calendering Specialists, Inc.
1119 Commercial Blvd., South
Arlington, TX 76017
(817) 467-1200
Don Ripley, Vice President, Production Manager
Services offered: Custom calendering
Equipment: Calender, 66" mills, slitters, dip tanks

The Crislip Corporation
121 Factory Street
P.O. Box 4441
Creston, OH 44217
(216) 435-6381
D.E. Crislip, Jr., President
Services offered: Tank lining and tank lining applicator rubber
Equipment: Mills, calenders, autoclaves, presses, air compressors, steam tables, lathes

Entropex
1390 Lougar Ave.
Sarnia, Ontario, Canada N7S 5N7
(519) 332-0430
Derek Smith, President
Services offered: Dewatering, reprocessing

North American Reiss Corp.
1 Polymer Place
P.O. Box 72
Blackstone, VA 23824
(804) 292-1600
Harry V. Newton, General Manager
Services offered: Silicone rubber compounds
Equipment: Rubber internal mixer, mills and extruders for straining and preforming

Procex Inc.
880 Cherry St.
Kent, OH 44240
(216) 673-1114
Fax: (216) 673-1115
Hank Wornoff
Services offered: Metal reclaiming - removing bonding agent, rubber and urethane from rubber-to-metal parts
Equipment: proprietary

E.L. Puskas Company
448 E. South St.
P.O. Box 229
Akron, OH 44309
(216) 376-5161
Ernest L. Puskas, Sr., President
Services offered: Grinding, mixing and color matching

Salem-Republic Rubber Co.
P.O. Box 389
475 W. California Ave.
Sebring, OH 44672
(800) 221-5389, U.S.A.
(800) 686-4199, Ohio
Fax: (216) 938-9809
A.V. Ney, President, General Manager
Equipment: Processing machinery and equipment, mills, extruders, calenders, cutting equipment, dryers, lathes, vulcanizers, autoclaves
Services offered: Hand and machine-made hose, custom calendered uncured materials
Capacity: custom calendered goods - 750,000 lbs/year

Sparton Enterprises, Inc.
3717 Clark Mill Road
Barberton, OH 44203
(216) 745-6088
James Little Jr. President;
Joseph Krunich, Sales
Equipment: Grinders, granulators, sifters and sizing equipment
Services offered: Rubber grinding, granulating, recycling
Capacity: 90 million lbs/year

Tooltec Inc.
2225 Meyer Road
Fort Wayne, IN 46803
(219) 426-4686
Karl Reuther II, President
Services offered: Manufacturing of trimless rubber mold; compression molds and injection molds
Equipment: Two CNC lathes, two CNC vertical machining centers, seven engine lathes, four Bridgeport mills, two radial drills, grinders

Note: Banbury, Barwell, Stewart Bolling, Henschel are registered trademarks

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